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SOCIETY OF ARTS.

FRIDAY, JANUARY 7th, 1853.

The Christmas recess affords a favourable opportunity for drawing attention to the principles upon which this Journal is conducted, and to the objects which it seeks to accomplish. As the organ of the Society, its columns are open to all whose contributions are deemed worthy of insertion; for an Association like this is especially dependent on the free interchange of thought on industrial subjects, and there are many men whose suggestions and ideas with reference to particular points are of great value, and who have no other means of giving them publicity. The ordinary meetings of the Society do not afford those facilities for temperate and useful discussion which are available in a Journal; and as each communication appears on the responsibility of its contributor, the general body is not committed thereby. A literary undertaking occupying a position of the kind has its independence preserved, and its utility secured, by thus throwing open its space to a voluntary supply of information. The community at large is greatly interested in the widest possible dissemination of knowledge on matters affecting their material progress; and the time appears to have arrived when all news of the kind is likely to be properly appreciated. Hitherto political intelligence has monopolized the attention of the public; but we seem brought, by the force of events, to the threshold of a new era—a hopeful one for the Society of Arts—when men will think and read more about what concerns them in their daily pursuits, and when economical and improved production will attract more notice. "The dignity of labour" begins to be realized; and surely, if specialties can support organs dedicated to their advocacy, a Journal devoted to the interests of the whole field of Industry ought to find "ample room and verge enough." There is nothing in the constitution of the Society which has started it to excite suspicion or misgivings as to its objects; for there can be nothing more free in the world than a voluntary Association, to which men may belong, or not, as they like,—and nothing less objectionable than the effort to promote the Industrial Arts—to draw attention to useful inventions—to remove or destroy influences injurious to production—and to carry out an organization by which labour misapplied may be saved, and knowledge of a practically useful kind widely circulated. The Society has completed its centenary,—and in that long space of time it has "done the State some service;" yet, among a hard-working, manufacturing, commercial people like ours, it is melancholy to think that the number of the Society's members is still so small, in proportion to the magnitude of the interests over which it watches.

With an essentially popular constitution, there is no reason why the Society of Arts should not be so powerful as to become an institution of the country. It strives to win that distinction by showing that it can be useful; nor is there any reason to despair that its efforts may yet be crowned with success. Great things are done now-a-days by the principle of association; and one of the most powerful instruments at its command is the Press. Without a journal, the Society has wanted a chief element of strength; for attendance and interest flag in all bodies brought together by voluntary means, where the stimulants of free discussion, oral or written, are either weakly supplied or altogether absent. The Society has nothing to conceal; what it desires to do, it well knows that it can only do by public support, and that to have that support its proceedings must be frank and open. No doubt there are many things in its own constitution that require alteration or amendment. It is not afraid of having such matters temperately discussed. The gain which the Society looks for in the establishment of a journal is not of a pecuniary character. It is entirely that useful information may be circulated in the easiest, quickest, and most economical way among members and the public; that voluntary effort, so apt to flag, may be kept awake and active by free discussion; that the machinery may be perfected for a propaganda of industrial knowledge and ready intercommunication on the practice of the arts throughout the United Kingdom, and its Colonies, and even in foreign countries; finally, it is that the Society's means of doing good may be, as much as possible, increased by the enlargement of its constituency. It has always been the boast of the Society of Arts that it lives upon the subscriptions of its own members, independently, receiving such aid from without as people may be disposed to offer, but asking no bounties from power, or no favours from patronage, that might compromise its position in the country. The confidence which it reposes in the public sympathy with its objects now demands a proportionate return. Unless the number of its members, and consequently the amount of its income, are greatly increased, the Society cannot occupy that enlarged sphere of usefulness now invitingly stretched out before it. It calls upon all members, therefore, to exert themselves,—

to remember that the Society is now exposed to an honourable rivalry with other bodies, some similar to, others differing from it in constitution, but all striving which shall be foremost in the promotion of the arts and sciences. If there is anything to amend or alter, let it be brought forward for discussion; but at least let the hands of the Council and the Executive be strengthened by a larger and a more vigorous constituency, and let the Society, having lived a hundred years from this date, "renew its youth."

CIRCULAR TO INSTITUTIONS.

C—Books—2.

Society of Arts, Adelphi,
January 1st, 1853.

Sir,—The Council of the Society of Arts, in continuation of a former Circular on this subject, dated the 26th of July last, have the pleasure of informing Institutions in Union, that Her Majesty's Commissioners for the Great Exhibition of 1851, have most liberally granted copies of the Jurors' Reports (No. 36), for distribution to such Institutions. The Department of Practical Art has also placed at the disposal of the Society, for the same purpose, copies of the Addresses of the Superintendents of the Department (No. 37). Dr. Lyon Playfair has likewise supplied copies of his Lecture on Industrial Education on the Continent (No. 38); Price's Patent Candle Company, a Report on the Schools attached to their establishment at Belmont, Vauxhall (No. 39); Mr. Mechi, his pamphlet on Agricultural Improvement (No. 40); Mr. Wilson, his Lecture on the Stearic Candle Manufacture (No. 41); the Society for Improving the Condition of the Labouring Classes, pamphlets on Model Dwelling-houses for Families (No. 42); and the Rev. W. W. Cazalet, his Lecture on the Musical Department of the Great Exhibition (No. 43). A limited number of copies of the Report of the Commissioner appointed to inquire into the state of the Mining Districts, and of a pamphlet by Mr. G. W. Yapp, on Art Education at Home and Abroad, have also been placed in the hands of the Council for distribution,—the former of which will be sent to those places where it is thought it will be received with peculiar interest, and the latter to those Institutions which having only recently joined the Union, were not in time to participate in the Art papers distributed on the last occasion.

The General Board of Health have delayed the issue of their Reports and Minutes (No. 32), in the hope of obtaining additional copies of some of their Reports, so as to be enabled to make up a larger number of complete sets. They are now about to be distributed, and the Board have kindly offered to transmit them free of expense.

In regard to the other publications, they will be forwarded during the ensuing week, through the same channels as the former parcel.

Edward Solly, Secretary.

FINE ART SECTION OF THE PREMIUM LIST.

In connection with this List, published in the last Number of the Journal, the following remarks are made:

As respects the first division of the list, namely, outline from poetic or historic subjects. Outline is an arbitrary mode of conveying ideas of form, which has its foundation altogether in art, and was its first essay towards perfection; and although the progress of painting has been so great as to nearly approach complete imitation by the help of light, and shadow, and colour; yet outline, simple and unaided, still remains duly appreciated, as efficient to produce the greatest and most essential purposes of art, viz., the ideas of action and impression in the figures it represents. There is not, in fact, any such thing as an outline in nature; yet we recollect more of a form by its boundary, or separation from other parts, than by its parts projecting towards us; hence arises the satisfaction we receive from a line that truly marks that boundary; though no such line in reality exists. The imagination immediately loses sight of the fallacy, and dwells upon the form within it.

A true outline is a perfect thing; it has no exemplar in nature, but is received as an arbitrary token of a substance. The image it excites is, indeed, more or less perfect according to the information or force of imagination in the beholder. Fill it with colour and light and shade, and thus attempt to make it an imitation of a real object, and it becomes subject to comparisons which, in well-informed minds, may diminish its force. Its simplicity is the basis of its power.

The value of outline may be fully appreciated by those who have observed the great degree of character displayed in profile outlines, and still more by those who are familiar with the beautiful works in outline by Flaxman, Retsch, and others. In regarding many of these, the mind is so entirely filled with the action and expression of the figures, and the ideas they suggest, that it shrinks from the notion of an attempt at further completion.

It may be remarked, great and enduring as is the fame of Flaxman, that his reputation mainly rests on the exquisite and varied compositions that he has left us in outline. Noble as are some of his executed works, as, for instance, the group of Michael and Satan, it is through the medium of pure outline that his holy and tasteful mind addresses the thoughts of so many now throughout the civilized world. Outline appears to be an art that, pure and abstracted from the bustling commonplaces of the world, is especially fitted to convey and illustrate poetic thoughts and images. In all departments of art is it also most *practically* useful. It decides the subject, composition, and character of a painting, or a piece of sculpture, or work in architecture, or design for manufacture, and is worthy of the most serious attention of practitioners in all branches of imitative art. Chaste and true, and characteristic outline, can be derived from no other source than a pure knowledge of beautiful form; and it is a most agreeable quality in an artist to be able to plant an image on the mind by a light, skilful, yet firm line. It may be well noticed here, that if an outline be drawn too hard, thick or black, that the figure it intends to convey may be forgotten in the line, and if too weak, its force may not be adequate to produce the desired effect.

As regards the Second section of the Fine Art List, viz., Illustrative Drawings in aid of Science, they divide themselves perhaps into two sections, viz., those suited by their size and treatment for lectures, and those adapted for books. It would be desirable that candidates in this class should keep this in mind, so as to render their labours directly available, if desired. The Society hopes that this class of art, while aiding the highest objects, may be not only highly useful, but also eventually substantially remunerative to the artist. On every occasion and subject now art is called in to aid the pen with illustrations, and lectures and pictures, mutually assisting each other, are everywhere placed before the public for its pleasure and advantage. Equally interested in Science and Art, the Society has had its attention particularly turned to this subject, by the many lectures given in their own rooms, and by the circulating scheme of lecture instruction, forming part of the advantages to the general public contemplated by the Union, now so widely going on between the Society of Arts and other instructive and scientific societies throughout the country. That a further degree of scientific art illustration is wanted than that already available, may be illustrated by a late remark of a distinguished botanist, "That there were but two men in the country that he knew of that could draw a flower !—that is scientifically and botanically as well as artistically." It is desirable that, in all cases, the representation should be of the actual size, or on some definite and simple *scale* as regards the actual size of the object represented.

In regard to the third section of the List, " Art Designs for Manufactures," a few words may be added as to the direction that ornamental art is likely to take in this country. The question of Design in this branch is one that has not till very lately taken a substantial hold on this country. At the first impression of its importance, and from seeing the baldness in design of many of our manufactures, the taste of the public, as well as the artist, in many cases, rushed towards the opposite defect—over-elaboration ; but that the English taste will eventually, perhaps, after a few oscillations, find its point of rest not far from *simplicity*, there is little doubt. A pure taste is even now gaining force among us. Art is but part of a whole. It is one manifestation of the spirit of the people, and that kind of art will alone take root and flourish that is in accordance with the national character. In the belief, therefore, that utility and simplicity will be the character of our art designs for manufacture, these few words are addressed to those who may be disposed to become candidates in this branch for the Premiums of the Society.

ART EDUCATION AT HOME AND ABROAD.

Under the above title a small pamphlet has just appeared, from the pen of Mr. G. W. Yapp, which is dedicated to the Council of the Society of Arts. The object of the author has been to embody the most important facts and opinions which have been placed before the public, from time to time, in connection with the Art Education of the masses ; at the same time having reference to the proposition recently submitted to Parliament in her Majesty's speech, viz., " the importance of considering a comprehensive scheme for the advancement of the Fine Arts and of Practical Science." The author shows that the large amount of attention which this subject is at present receiving is not the result of chance, but of a long chain of circumstances and wants to which public attention has been directed.

These wants have now become greatly aggravated, owing to the attention which has been directed to them since the close of the Great Exhibition, where the masses were taught to appreciate art, and saw their own deficiencies, as compared with the productions of their foreign competitors. Having referred to the foreign schools of art, and the importance which Continental governments attach to them, he endeavours to show that the same narrow-minded views which impeded the first establishment of Mechanics' Institutions in this country, is again operating against the introduction of a national system of Art Education, and with equally little foundation.

The want of sound judgment in the establishment of drawing-schools, or in the choice of those who have been employed as teachers, in connection with Mechanics' Institutions, have in the majority of instances led to unfavourable results ; and the want, still felt among the industrial classes, was endeavoured to be met by the establishment, in 1837, of the schools of design, as it is at present by the Department of Practical Art.

The author next proceeds to consider the present condition of the British Museum—its rapid growth, the numerous and varied collections which it contains, and the impossibility of adapting the building to the requirements of the public. This has led Mr. Hallam, one of the Trustees, to advocate the erection of an entirely new building ; and this, again, has been followed by other propositions, for the re-distribution of the seven distinct collections ; viz., books, manuscripts, antiquities, prints, mineralogical, botanical, and zoological specimens, within its walls.

The fact of historical portraits being arranged in the Zoological Gallery at the British Museum, one among many of the accidental mixture of subjects, has led to a proposition that the collection of stuffed animals should be located in the vicinity of the Zoological Gardens ; while, with respect to the splendid collections of sculpture, coins, medals, and the drawings and prints by old masters (now shut up in drawers, and lost to the public), could not be more appropriately placed than in the National Gallery. They might be exhibited, as is the case in the Taylor Gallery, at Oxford, in the Louvre, at Paris, and many other places, in long series (framed), illustrative of the peculiarities and growth of the different schools. The foregoing considerations lead naturally to the following propositions. That our collections of national pictures should be brought under one roof; and that in addition to providing space for pictures and prints, an architectural museum might be formed, in which collections of Saxon, Norman, Gothic, Tudor, and Elizabethan specimens might be made with comparative ease. The nation already possesses upwards of 6,000 or 7,000 examples of ornaments, collected by the late A. W. Pugin, which were selected for the use of the carvers employed at the new Houses of Parliament. This would tend much to counteract the want of style so apparent in our national buildings. It is not proposed to limit our collection of national treasures to one building only; but, if collected or brought to a focus, great facilities would be afforded for re-distributing casts and copies of the best examples.

In conclusion, our author remarks :

> "It is a creed with some that England, as a nation wants taste, that she is deficient in appreciation of form and colour. It may be true. She was once illiterate; she is not so now. Education has not yet become that universal endowment which the best interests of the country demand; but no one ever doubts that all could learn to spell, to read, and to write, if instruction were offered them. Why, then, should we doubt the existence of other talents until we have made an earnest attempt at their cultivation ?
>
> "When the College of Industry, of Art and of Science, shall have been thrown fairly open to the rising generation, and when the people of England shall have had opportunities of cultivating knowledge and beauty in museums, where space shall prevent confusion and arrangement invite inquiry, it will be found that our oft asserted artistic incapacity was a fiction, and that our powers, like the wheat in the hand of the mummy, only waited for air and light to spring into life, and bear fruit abundantly."

PHOTOGRAPHIC SOCIETY.

A Committee was formed early in the spring of last year, with a view to the establishment of a Photographic Society, but the existence of the Patent rights prevented the object from being carried out at that time. The discussions, however, which took place on the subject between Mr. Fox Talbot and the Committee, and the appeal made to that gentleman by the Presidents of the Royal Society and the Royal Academy, induced him to abandon them, and, with a slight exception, to leave the Act unfettered. This obstacle being removed, the Committee have resumed their labours ; and it is understood that nearly 200 hundred persons have given in their names as desirous to join the Society, and that a meeting will shortly be called to launch it, and elect its officers. It is intended to hold meetings once a fortnight during the first year of its formation, when communications will be read, specimens exhibited, and discussion ensue on subjects and novelties connected with the art. Probably, a laboratory will, in time, be established, where experiments may be carried on and processes tested. A gallery, too, of photographic pictures will doubtless form part of its proceedings, and remain open during the usual seasons, when the progress of the art will be shown from year to year. The subscription, it is said, is to be one guinea annually, with an entrance fee of one guinea. The bringing together individuals who have hitherto been working at the art, in ignorance of what each was doing, cannot fail to assist in its development. Indeed, this was strikingly exemplified by the Great Exhibition, to which may be mainly attributed the impulse that has been given to Photography. The walls of the Society of Arts bear striking testimony to this fact ; and it may be confidently expected that the Photographic Society will aid materially that development of the art so auspiciously commenced by the Great Exhibition.

THE PROGRESS OF STEAM NAVIGATION.

(From a Correspondent.)

THE progress of steam navigation during the past twelve months has been so marked and satisfactory, that it is proposed to pass in review some few of the more important changes and modifications that have been made during that period.

The use of iron in the construction of the hulls of our merchant marine has been greatly on the increase ; and at no period since its first application to this purpose has it found more favour. Both on the Thames, on the Clyde, and at Newcastle, iron ship-building is now being carried on by the eminent firms of Messrs. Mare, Scott Russell, Laird, Tod and Macgregor, &c., &c. Though not adapted to war-steamers, owing to the shot on passing out carrying away an entire plate, and so making holes which it would not be possible to stanch, it seems admirably calculated for the merchant service. For some time there has been a strong controversy as to whether wood or iron was the safest material to employ. The advocates for the use of iron contended that by building a ship in different compartments, with water-tight bulkheads, one compartment might be filled with water, and yet the vessel float with perfect safety. On the other side it was asserted, that supposing a vessel to strike upon a rock, the danger with an iron ship would be greater than with one built of timber, as any damage could not be so easily repaired. It is singular that during the last year a large steamer of each kind has been completely wrecked and lost, under somewhat similar circumstances. Her Majesty's ship, *Birkenhead*, an iron vessel, it will be remembered, struck upon a rock a-midships, so that the fires were put out, and all control over her was immediately lost. The waves dashing over, caused her to break at this point, and then the two pieces went down. The other case was that of the *Memnon*, a timber ship belonging to the East India Company, which was lost in a typhoon in the Red Sea. It is believed that the present system of measurement for tonnage acts prejudicially in obliging ship-builders to make bluff bows and sterns, to the absolute loss of speed. It is said to be owing to this cause that the French war-steamers, the *Canopus*, for instance, attain a higher speed than our own frigates.

In the engineering world attention has been principally given to direct-acting engines, of which there have been several very successful adaptations, both to screw and paddle-wheel steamers. In these engines the ponderous beams and frame-work, which in some instances, as in the large vessels belonging to the West India Mail Packet Company, amounted to thirty cwt.

per horse-power, and even more, with the old flue-boilers, are dispensed with. The vertical flue-boilers, which very nearly approach tubular-boilers, patented by Mr. Mills, the engineer of that Company, and by Mr. Lamb, of the Peninsular and Oriental Company, in conjunction with the double-cylinder direct-acting engines, the best adapted for engines of 800 horse-power, have tended materially to reduce the weight, which by these means has been brought as low as eighteen cwt. per horse-power, and with tubular-boilers to fifteen cwt. per horse-power, a saving of 100 per cent. over the old system. Several rotatory engines have been patented, and some of them have been tried; but as yet their capabilities have not been sufficiently tested to enable an opinion to be formed as to their economy and general applicability. Mr. Penn is now constructing for the *Himalaya*, a new screw steamer, belonging to the Peninsular and Oriental Company, engines of 500 horse-power, on the direct-acting vibrating principle, first patented, it is believed, by Mr. Joseph Maudslay. It will therefore soon be seen whether this principle can be safely and economically adapted to engines of this power.

Amongst the screw steam-ship companies, the General Screw Schooner Steam Navigation Company must be placed first, not only for the safe and sure policy they have adopted, but also for having commenced, through Mr. Laming and his friends, the use of direct acting engines, so well adapted to the circumstances of the case. The Australian Company have hardly yet had a fair trial, for their mail contract commenced before they could possibly get steamers built, and hence the necessity for purchasing old Government steamers. Recently, too, the Government have been building screw-steamers exclusively for line-of-battle ships, and have ordered four pairs of engines from Messrs. Maudslay, Sons, and Field, and four from Messrs. Penn, each pair of 400 horse-power, and on the horizontal cylinder direct-acting principle. The boilers and engines in these steamers are to be placed from seven feet to eight feet below the load water-line. The Peninsular and Oriental Company are also beginning to acknowledge the value and advantage of the screw, and many of their new vessels are on that plan; amongst others, the *Himalaya*, of upwards of 3,000 tons burthen. It is to be hoped that some of the old Companies will consider well the advisability of using the screw propeller, especially for long voyages; and also that they will take into consideration the propriety of putting their engines into faster vessels. During the year, proposals have been made for the construction of very large steamers, of 15,000 tons burthen, to be propelled by the screw and the paddle-wheel conjointly. The paddle-wheels are intended to be worked by a pair of direct-acting engines, into which high-pressure steam is to be introduced; the steam being cut off at one-fourth or one-fifth of the stroke, and then led away to another pair of direct-acting condensing engines, working the screw-shaft at a great velocity. Mr. Brunel is the promoter of the plan for the large boats. Several very important improvements have been introduced in the screw propeller—that of feathering, for instance—for diminishing the loss of speed while sailing, and several very easy methods of lifting it on deck for examination and repair, when on a voyage. There can be no doubt, that though not applicable to shallow rivers, the screw propeller is the most desirable means of propulsion for long voyages and deep sea navigation.

The application of auxiliary steam power, first proposed by Mr. Samuel Seaward in 1829, still continues to attract attention; and if it is an improvement for colliers on a short voyage of four days from Newcastle to London to be so supplied, how much more so would it be for an East Indiaman on a four months' passage, and where probably a small assistance would enable her to overcome light and adverse winds. Supposing only a month could be saved in a voyage to India, each ship would thus be enabled to make an additional journey a year; and as the yearly expenses for the crew, &c., would continue about the same, there would result a saving to the public and a direct gain to the owners. In *The Witch of the Wave*, *The Challenger*, *The Challenge*, *The White Squall*, and several others, this plan has been adopted, and the result has been that the voyage to China has been peformed in ninety-four days.

Scientific men are now endeavouring to devise a means of obtaining power other than by the combustion of coal and the evaporation of water. When it is considered how large a proportion of the tonnage of a vessel is occupied by the fuel, and the great expense that the Companies are put to by having to export coal from this country, it will be recognised as a most important desideratum. The caloric engine of Ericsson, of which so much has been said lately, but of whose performances so little seems to be authoritatively known, still requires coal; and so, supposing it to equal all the glowing reports which have reached this country, it yet does not entirely effect the object desired.

TRADE MUSEUMS.

The following Circular has been addressed by Her Majesty's Commissioners for the Exhibition of 1851, to most of the Exhibitors in the First Four Classes; and as it bears in some degree upon the intentions of the Commissioners which were reported on by the Council on the 22nd of December last, it may be considered interesting to the members of the Society:

Office for the Exhibition of 1851,
Marlborough House, Pall Mall, London.

Sir,—I am directed to inform you that at the close of the late Exhibition many of the Foreign Exhibitors consented to leave with Her Majesty's Commissioners Specimens of the Produce exhibited by them, which, together with similar Specimens from the Exhibitors of this Country, form the nucleus of a collection which Her Majesty's Commissioners trust soon to find means to render useful to the public and to the Exhibitors themselves, and which is now by permission of Her Majesty deposited in Kensington Palace.

Many of the Foreign Commissioners at the same time expressed a wish to be allowed to have in return some Specimens of the Produce of England, shown in the Exhibition, to be deposited in some place where they could be readily consulted by the public of their respective countries.

Her Majesty's Commissioners being desirous of complying with their wishes, have directed Collections of Specimens to be prepared, which, with few exceptions, will be confined to Raw Produce.

It is found desirable to obtain, among other things, Specimens of , and Her Majesty's Commissioners would be glad to know whether you are disposed to furnish for this purpose
of the same description as that exhibited by you.

They would be glad to receive an early reply, and I will be happy to give you any further information on the subject. Should you wish to see the progress already made, Mr. Read will be in attendance for that purpose at Kensington Palace, between the hours of Ten and Twelve o'clock. I have the honour to be,
Your most obedient Servant,
(Signed) HENRY C. OWEN,
Captain, R.E.

HOME CORRESPONDENCE.

THE PHOTOGRAPHIC EXHIBITION.

SIR,—The Photographic Exhibition in the rooms of the Society of Arts is eminently suggestive, and, as the first of the kind in this country, claims especial attention. In this gathering together of *sun-pictures,* there are examples of almost every degree of excellence, and of a large number of defects; it therefore becomes a most useful study to all who are interested in the progress of employing one of the most subtle of the physical agencies in the art of multiplying the beautiful and preserving memorials of scenes and persons, rendered valuable by their perfections or their associations. Of the excellencies, and many of the defects, notices have already been given in the Journal of the Society; to these, therefore, it is unnecessary to refer in detail. It is, however, apparent that many of our best Photographers, although exhibiting evidences of superior manipulation, do not sufficiently appreciate the importance of attending to the science, by which alone they can be guided to excellence in the art they so zealously cultivate. In the very best pictures in the Exhibition there will be found some points which are departures from nature; there has not yet been produced a Photographic picture which would satisfy the educated eye of a Claude, a Turner, or any of our eminent living landscape painters, who have studied nature under every aspect of light and shadow. Colour may do much to deceive us into a belief that we look through air as through a veil, at the gradually fading outline and tints, constituting distance; but colour is not absolutely necessary to produce this upon a plane surface; it may be effected by the judicious disposition of black and white. It is difficult to say if we may hope to solve the Photographic problem, by which we may produce pictures agreeing in illumination with that of the objects copied,—whether we may succeed in producing that *kind,* as distinguished from *degree,* of sensibility, which may be relatively disturbed or chemically changed by radiations of very unequal intensities, and influenced at the same time by many disturbing forces.

To select a group of Photographs as examples, the very excellent pictures by Mr. B. B. Turner may be chosen. Beautiful as these are in many respects, it will be found that the lights upon the trunks of the trees, and those spread over the various surfaces of *green* sward, *brown* paths, and *blue* water, are not such as we see in nature. The "*Photographic truth*" is not nature's truth,—the watery mirror brightly reflecting solar light never gave to the eye such an image of the church as that which we perceive in this picture. The productions of Mr. Buckle and Mr. Roslyn are of another style, and may be selected as the nearest approaches which have been made to obtain that delicate gradation of lights and development of the parts in shade. Still, I am satisfied these gentlemen would themselves admit that their Photographs are far from realizing those beautiful effects which they have studied so earnestly to reach—as is evident by their works. The same may be said of the productions of Messrs. Ross and Thomson, of Mr. Owen, Mr. Fenton, Sir William Newton, Mr. Stewart, and others. The catalogue informs us that the processes employed have been "*paper,*" meaning, in all cases, the Calotype of Mr. Henry Fox Talbot; *albumenized glass* and *paper;* "*Waxed paper,*" usually the process of Le Gray; and "*Collodion*" in its various modifications. Now, the point to which I desire to direct attention is, that each of these processes has its own scale of action; and that effects which can be produced by one, cannot be obtained by the other, under the same conditions of radiation. To give an example: a well-defined prismatic spectrum is passed through a piece of glass, stained yellow with the oxide of silver. In such a spectrum the *colours* of the rays are very slightly affected; but if we throw this spectrum upon a piece of positive paper, prepared with chloride of silver, a very long time, even in the brightest sunshine, is necessary to produce any change; and even after this prolonged action, all the space covered by the luminous rays remain *unchanged,* a little blackening taking place over that section beyond the violet ray, where no light is detected. If we substitute the far more sensitive calotype paper, the result is nearly the same, but the action takes place much quicker; and with the waxed paper the darkened space is only brought down into the violet ray, as it would appear, by the alteration of the refrangibility of the chemically active ray by the waxed surface through which it has to pass. The effect on albumenized glass or paper is not remarkably different from this. A collodion plate is placed to receive the spectrum, and if it is exposed for one minute to its action, and then the effect developed in the usual way, it will be found that, through the whole length of the *green, blue, violet,* and the extra-spectral rays, an intense impression has been made. If additions of spirits of wine are made to the collodion, this chemical change is still prolonged in a most remarkable manner; and I have obtained conditions, under which every luminous ray but the *red* (which, by the way, will sometimes act powerfully on varieties of the calotype) acts with energy, and the rays beyond the violet with singular force. The addition of alcohol destroys, to a great extent, the adhesion of the film of collodion: but, by overcoming this, I believe we have indications of a surface which may be equally acted on by each chromatic radiation respectively. Many of the beauties in the collodion photographs by Mr. Goodeve, Mr. Horne, and Mr. Delamotte, are, I believe, due to this property.

By the employment of organic compounds with the argentine preparations, I am satisfied we may equalize, to a far greater extent than has hitherto been done, the chemical inequalities of the luminous radiations. An extensive series of researches in the direction indicated are required (a few of these are engaging my attention), and every discovery in this line of research, will tend to the improvement of the art, viewed with reference to its artistic capabilities. Neatness of manipulation will do much; but we see, by the examples before us, that this merely is not sufficient to enable us to picture Nature in all her varying aspects of light and shadow, of repose and life. Researches of the kind indicated are required; and since they are easily carried out, and must furnish important results, let us hope they may engage the attention of some of the zealous photographers who have added to the interest of this, the first Exhibition of Photography in England. ROBERT HUNT.

Sir,—In your last week's review of the Photographic Exhibition, you say, with respect to the series of pictures exhibited by the Royal Commissioners, that they are, with the exception of Mr. Owen's contributions, scarcely so meritorious as many others in the collection.

This is very true; but if you had made the phrase a great deal stronger, it would have been a great deal truer. It was to be delivered of these abortions that French photographers were invited over to this country at the very time that Professor Goodeve was threatened with expulsion from the Crystal Palace, while engaged in the production of the pictures, some of them copies of the same statues sent by him to the Society of Arts' Exhibition.

Let foreign artists, if they possess superior skill, be welcome to employ and receive the reward of it here; but such claimed superiority surely should be clearly ascertained before it is officially recognised. Had this rule been observed by the Royal Commissioners, we should have had a better record of the Great Exhibition.

P. Q.

Sir,—Surely Captain Ibbetson must be in error when he speaks of his having been stopped in his proceedings with reference to his photogenic drawings by Mr. Fox Talbot's patent, in 1840. That gentleman did not take out any patent till 1841. F.

GREAT EXHIBITION SURPLUS.

Sir,—As a member of the Society, I have perused with interest, not unmixed with astonishment, the recent Report of the Royal Commission. It has fallen coldly upon the public, been protested against by the learned bodies of the metropolis, and is disposed of with more candour than praise by our Council. When every one was on the tip-toe of expectation to know what would be done with the surplus of the Great Exhibition, down upon their anxious upturned faces, like a shower-bath, comes the announcement that sixty-eight and a half acres of land have been purchased at Kensington Gore, for a sum which more than entirely absorbs it. They look for explanations, and they are favoured with the misty outline of an impossible scheme, which it seems utterly unaccountable how such men as compose the Royal Commission could ever have given their sanction to. Even assuming that an investment in land was necessary, the selection of a site cannot be regarded as a happy one. The masses were once attracted to Kensington; but did they go there conveniently to themselves, or with the favour of the inhabitants? was it looked upon as a vulgar invasion, or not? and will they go again? Will students who find it hard enough work to struggle to Somerset House and Marlborough House from the cheap suburbs, be able to reach Gore House day after day? Does the organization of this vast metropolis, which is constantly changing, justify so enormous an expenditure as is contemplated for a site which, twenty years hence, may be the least accessible part of town? It appears to me that the Royal Commission have deliberately sacrificed the surplus of which they were the trustees to the conveniences of Government. Government wanted space for the new National Gallery, and for portions of the British Museum, and they rush with the shillings of the million to help it, without inquiry whether such an alliance is necessary or desirable. They commit the proceeds of a great voluntary effort to a dubious partnership with state establishments, which have never been satisfactorily managed. What can the people think of an act which associates their contributions with ideas of Trafalgar-square architecture, picture-cleaning carried out with the scrubbing-brush, railings that cost 14,000*l.*, the jobbery, and the bickerings,—extended to the surplusage of the Old Curiosity Shop in Bloomsbury? Then, as if all this was not sufficient, the most triumphant success of modern times is to be associated with the Government School of Design, hitherto an admitted failure, and the Government School of Mines, which has already had a home provided for it in Jermyn-street, far more comfortable and splendid than, by its usefulness, it has yet been able to justify. Even if these schools had given much clearer evidences of a suitable return for the vast outlay upon them, surely the Royal Commission need not have interfered with the State as long as it felt disposed to act as their wet nurse. I feel satisfied that the application of the Great Exhibition surplus to any scheme dependent on Government co-operation is a monstrous mistake. It chills all the enthusiasm of popular sympathy; it substitutes the idea of taxation for that of voluntary contribution; it puts the industrial arts under the shadow of a State machinery; it refers to parliamentary votes what every man who lives by labour would like to honour with his independent support.

But let us assume that this union is a right one—that the Commission and the Government between them may properly spend 400,000*l.*, or more, upon a site of 150 acres, without having commenced to lay one brick upon another; what remains to be done afterwards, and how is it proposed to proceed? Buildings are to be erected museums to be formed, a great university to be endowed, and the learned societies of the metropolis to be brought into "juxtaposition." The most magnificent schemes must submit to the vulgar test of practicability; for that, after all, is what distinguishes greatness from charlatanry. Mahomet went to the mountain when it would not come to him, but the Royal Commission have no such alternative. Suppose the learned societies object to be exhibited as a happy family,—the Geographicals refusing to lie down with the Geologicals, and the Asiatics, the Chemicals, the Engineers, the Antiquaries, the Agriculturals, each preferring their own fig-tree, as they at present possess it. The Royal Commission have included these bodies in their plans without even the formality of consulting them. They make the supply of a want which they have not ascertained the existence of a plea for a land investment at Kensington. Again, take the money question,—where, in the name of all that is fortunate, are the funds to come from with which to construct immense buildings, collect great museums, and salary a pompous array of professors? It is not, surely, expected that all this will be done by voluntary contributions. Then you fall back upon the public purse — Government interference — mismanagement, failure! Alas! for the Royal Commission! They have sunk the money with which they were entrusted in a land speculation, and they will never get it back again. Something might be hoped for if they turned market-gardeners, or if they came to terms with some "disinterested Mr. Kelk," who would cover their estate with houses. But the cheese-paring economists of Parliament will never vote supplies to relieve them from the position in which they have so hastily involved themselves. Even the first appeal to the House of Commons on this subject excited murmurs which could not be mistaken; and the Chancellor of the Exchequer had to give assurances which will not be forgotten hereafter.

Yet I am willing to argue this question as if all that has been done is right, and as if all that is contemplated were feasible. What then? Is this vague scheme that has been put forward without details, and defended by an appeal to the most doubtful continental experiences, so desirable after all? Is it the best way of going to work for the promotion of the Arts, and of industrial education? Will it most help on the objects to which the Great Exhibition was dedicated, and thus satisfy the public as to the discretion with which the Commission has discharged its trust? I think not, and will state shortly why I think so. It appears to me, that the question of industrial education has been entirely misapprehended; that you cannot successfully teach the arts of life in schools, or safely hand over the principles upon which they rest to professors. The tendency of all collegiate systems is to dogmatize, and dogmatisms are fatal to progress. The first men in every branch of industry, and the best and surest instructors in it will give their lessons to apprentices in the workshop, not to pupils in the class-room. It must always be so. They will labour where the rewards of their exertions and talents are greatest; so that to inferior hands, or to pretenders, the chairs of the proposed University will be surrendered. Our schools and colleges may with advantage have the present course of instruction given in them widened. Science, in its various branches, may share more equally with literature the attention of our youth; but any attempt to introduce into this country the technical education of the Continent, must prove an egregious failure. There is not only no adequate proof that the want of such a system is felt, but the whole weight of evidence is in the other direction. Even the facts collected by Dr. Lyon Playfair abroad tell more against than for the views of the Royal Commission; and I do not hesitate to say, that an inquiry of the kind, less partially conducted, would have dealt a decisive blow against the whole scheme. In this country our experience runs entirely in the opposite direction. We have never tried anything of the sort without its being followed by a disastrous break-down. We have taken and still hold the highest place as an industrial community, without any such aids. Our great manufacturers and engineers, for the most part, look down with disdain upon the feeble efforts made to help them by a body which, if they really wanted the thing done, they would begin by dispensing with. They know very well that if technical education was desired, they themselves must supply it; nor will they readily consent to spoil the training of the workshop by making it a school, or that of the school by turning it into a workshop. Except in very rare instances, the two things are incompatible, for when labour commences, scholastic instruction terminates; and in learning to earn his bread by his own industry, the boy becomes a man. He will give or take information upon equal terms, but he can no longer be taught. I believe in the desirableness of a more liberal, and less purely classical, or mathematical course of education in schools and colleges. I believe in a more open and expansive system of study at our Universities; I think the existing machinery may be made more useful, and more appropriate to the wants of the age: but a new University, new professorships, new degrees, and a new curriculum, can no more be made respectable in the eyes of Englishmen, than a new empire or a new aristocracy. The whole thing would have a Brummagem character at once, and even the west end site, the enormous expenditure, and the influence of museums and galleries of art, would not save its reputation. If more science is wanted in this country, the want will create its supply in the natural way, without any state forcing; if scientific men do not meet with adequate encouragement and support, it is because they have not condescended to give to practice the full benefit of their abstract labours.

Among a free community like ours everything that is worth knowing soon finds its way into print; and a large, intelligent, and increasing body of readers offers to intellectual effort the strongest incentives on the one hand, while the pressure of necessities, as they arise, stimulate on the other. Our system of voluntary associations, for the promotion of all public objects, guarantees us against the neglect of any flagrant evils in our social state; and it is far better that we should try to improve and strengthen the means we have got for accelerating the progress of the Arts, than to embark all our resources in new and doubtful ventures.

As a member of the Society of Arts, I feel indignant at the treatment which it has received from the hands of the Royal Commission. The scheme of the Great Exhibition originated in our Council—its success was largely due to members of that body. The early responsibilities of the undertaking were allowed by the Commission to rest heavily upon us, and if a strong claim existed on the appropriation of the surplus, it was ours; yet we are coolly placed on a level with all the rest of the world, and a formal application which we made was not even formally replied to. I am not surprised, therefore, at the guarded tone of independence with which the Report of the Commission has been treated by the Council. The freedom of a correspondent writing on his individual responsibility exempts me from their reserve; and it is well that the conflict of opinions on such matters should find vent in the Society's Journal. I do not question the sincerity with which the Royal Commission have sought to discharge their duties; but I think their scheme, so far as it has been developed, a hazy chimæra; and I mourn over the £150,000,—the shilling surplus of the masses,—sunk in a Cabbage-garden at Kensington-gore. Δ.

LECTURERS.

31st December, 1852.

Sir,—Permit me to avail myself of the opportunity afforded by this Journal to remark on the reception sometimes experienced by gentlemen engaged as lecturers on visiting some provincial institutions to fulfil their enagements; who, from want of due consideration, as I humbly conceive, are scarcely welcomed or at all noticed by the managers or officials.

For example, one gentleman of great eminence for scientific attainments and qualifications, some time ago gave a lecture in a provincial city, and, from the time he arrived until his departure, never saw one of the officers or managers, or at least not one came forward to greet him, and his fee was sent to him by a porter or messenger.

No doubt it must be conceded that these gentlemen, manifesting their superiority, as implied by their coming to teach, are entitled to be received in a courteous and hospitable manner, and made to feel a pleasure in their visit and in the performance of their duties, as imparting knowledge, with mental and intellectual gratification, to a pleasing and an agreeable party assembled and predisposed to be instructed and gratified.

The institution with which I have been connected for fifteen years has always acted in a very different spirit.

SURRIENSIS.

LECTURES.

SIR,—My experience in connection with the Literary and Scientific Institution of this city induces me so entirely to accord with the proposition which has emanated from the Society of Arts, in reference to the union of Provincial Institutions, that I may perhaps be excused for troubling you briefly with the results of that experience.

The great difficulty with which the managers of an Institution like our own have to contend, is the provision of competent lecturers,—gentlemen properly qualified to give a popular exposition of the subjects treated of, without importing into their lectures topics of a political or sectarian character.

I think there can be little question that the Society of Arts could organize and liberally endow a corporation of gentlemen who should devote their time and talents exclusively to provincial lecturing,—stated intervals and regular circuits being appointed by a Central Committee of Management; while the requisite funds might be provided by an annual subscription from each Institution throughout the country, the amount to be regulated by the number of its members.

I believe that for twelve or fourteen such lectures, to be delivered at regular intervals, during the months of September, October, November, December, January February, March, and April, the Institution with which I am connected would cheerfully subscribe a certain sum per annum, in the ratio of the number of its members; and as there are several other Institutions within twenty miles of this city, which would no doubt be equally glad to secure for a fixed annual payment the services of a body of lecturers, upon whose ability and discretion they could rely, one heavy item in the incidental costs, that of travelling expenses, would be materially diminished.

What Provincial Institutions want is, (1) Lecturers, who, being thoroughly masters of their subject, should be able to embody, in a clear, succinct, simple and intelligible form, the most important results—the salient facts and prominent truths—of those studies to which their attention has been specially directed, and who, entertaining an earnest conviction of the elevated and elevating character of the art, science, or particular branch of literature to which they have devoted themselves, would imbue their hearers' minds with a corresponding conviction: and (2) Lectures, which should include within their scope, not merely the graces, but the utilities of our daily life,—teaching the merchant the soundest principles of commerce,—the manufacturer, the most valuable application of mechanics to the processes of his business,—those engaged in the production of textile fabrics, correct principles of taste in regard to the combination of colour,—potters, iron-founders, and all classes employed in "bringing rude matter into due form," the laws which should regulate design, and the agriculturist those facilities with which chemistry is daily presenting us for increasing the productiveness of the soil.

I think we cannot fail to observe, and I hope the Government will not be slow to discern also, that in the lecture-room of every Literary and Scientific Institution and Mechanics' Institute we are now planting *a pulpit for lay preachers*, whose functions, while they do not clash with, are second only in importance to those of the ministers of religion; and it is a matter of vital concern not merely to the community, but to the State, that these secular pulpits should be filled by well qualified men, and not occupied by empirics, shallow theorists, mimes, or political propagandists.

I am, Sir, yours, &c.,

J. S.

——— Mechanics' Institution,
27th December, 1852.

SIR,—We have had the Circular on the subject of Lectures in the ensuing Spring, issued by the Society of Arts. We regret that neither our funds nor our arrangements will permit us to avail ourselves of the aid thus offered. The truth is, for several years past we have tried the lecture system under the most favourable circumstances, with the best and the most popular lecturers we could procure, and we have, all of us, with one or two exceptions, come to the conclusion that there is but little of real good to be derived from it in its present shape. If we look to it merely as a means of replenishing our scanty resources, it but rarely effects this object; indeed I may say very seldom, or never, if we take the result of an entire session. The surplus, which a successful lecture leaves us, is sure to be swallowed up by one of its dull or unpopular successors; and as a means of conveying real lasting instruction, lectures, we find, are but of little use. To be able to follow a lecturer continuously, without losing the connection of the discourse, or missing the steps of the argument, implies some knowledge at least of the subject in hand; and this is the very thing which our people have not got. They want the very first elements of knowledge familiarly and clearly explained. We cannot expect, or get, if we expected, great lecturers, with half the alphabet attached to their names, to come down from their theories, and to teach the A B C of knowledge. Hence lectures which call for no exercise of the faculties, such as lectures on music, or comic displays, will always draw large audiences. I fear we shall never succeed in combining the theatre and the school-room together. It is an old complaint, and a true one, there is no royal road to learning, nor yet a flowery one; very irksome this, but so it is. As there seems to be some apparition "looming in the distance," as the phrase goes, of something or other being done for the *instruction* of the people,—leaving their *education* to those who ought to look after it, *parents* and *pastors*—could not your Society aid us, and others like us, in this matter? When we want lecturers, we know *where* and *how* to get them without going to your Institute's Committee. But what we cannot get are cheap books, cheap maps, cheap models, cheap diagrams, intelligent class-teachers, instructions as to how such classes should be organized, indications of what we ought to aspire to, and of what we ought to leave alone, as being beyond our scope. Assist us in these matters, and you will truly aid us, because we require help; what we can do for ourselves we shall be slow to ask others to put a hand to.

I am a director of the above Institution; but as I do not care to protrude my name on the public, I subscribe myself Your obedient Servant,

Ω.

PROCEEDINGS OF INSTITUTIONS.

CARLISLE.—On Tuesday evening, Mr. James Simpson, jun., delivered a Lecture to the members of the Mechanics' Institute, on "Meteorology, and the Instruments connected therewith." The lecture was divided into three parts. In the first, the nature of the science was explained; in the second, the various instruments used in connection with it, such as the barometer, thermometer, &c., and the principles of their construction were described; and, in the third, details were given of some of the most interesting facts connected with the science. The attendance was good, and the lecture, which was worthy of high commendation, was listened to with marked attention and interest.

HANLEY.—A Lecture was delivered to the members of the Young Men's Christian Association, on the evening of Tuesday, the 28th ult., by the Rev. J. M. Martyn, on "Our World, its Governor and Government." The object of Mr. Martyn throughout was to disprove the arguments urged by sceptics that the world had not originated in the infinite wisdom of a Divine Maker; in doing which he took a comprehensive view of the wonders and beauties of creation, and particularly examined man in his mental and physical senses, and showed, by the most undeniable reasoning, how all to which he had referred established the truth of their creation by Providence.

LEEDS.—The Rev. Professor Sedgwick, M. A., &c., recently lectured to the subscribers of the Leeds Mechanics' Institution and Literary Society, "On Glacial Phenomena in connection with erratic block of transport." After briefly sketching the general classification of geology with three great epochs, the Professor proceeded to state that the existence of blocks of granite, and other stone, in positions remote from their native rocks, had excited much speculation among philosophers, and various causes had been assigned for the phenomenon. He then considered and described the several operations of heat and water concerned in producing the present characteristics of the earth's surface; and the vast changes brought about by this agency. He showed by remarkably truthful views of Scawfell, and other mountains, the banks and strata of mist and fog, produced by warm vapours ascending from the valleys and encountering colder currents in the higher regions, so that at certain points great bands of vapour or cloud accumulated. Now, in Alpine regions this vapour was condensed into the condition of snow, and falling in localities where the temperature was rarely above freezing point, vast accumulations of snow and ice were formed in all the lofty points, and collected in all the higher valleys. In the channels where the water would naturally flow from the high regions, and where, in immediate contact with the rock, the higher temperature allowed some water to retain its fluidity, the snow, more or less condensed, and accompanied by fragments of ice, formed at the surface, or rolled down in avalanches, lay vast beds of scarcely fluid, and yet not quite solid matter, known as glaciers.

PETERBOROUGH.—The Members of the Mechanics' Institution met on Monday evening to appoint the officers of the Institution for the current year. There was not so large an attendance as on some former occasions; still a great many of the principal and most active Members were present. Mr. Whitwell, a Vice-president, occupied the chair. The Rev. William Strong, of Thorpe Hall, was unanimously re-elected President, and the Rev. E. Davys, and Mr. Whitwell, were re-elected Vice-presidents, and the following other officers were next chosen, namely; Treasurer, Mr. George Cattel (re-elected), Secretary, Mr. Robert Smedley (re-elected), who was thanked and highly complimented by the Chairman and Members for the efficient and willing manner in which he had discharged, during the past year, the arduous duties of the office of Secretary. Mr. Thomas English was also re-elected Librarian; and the following Members were balloted for to form the Committee of Management; namely, Mr. James Aitken (re-elected), Mr. R. Cornish, Mr. William Ruddle, and Mr. James Ruddle (both re-elected), Mr. J. F. Wilson, Mr. H. Lavington, Mr. B. Taylor, Mr. James Briston, and Mr. John Thompson, jun. The Curator will be appointed by the Committee at their next Meeting. Messrs. S. Rutland and R. Davison were unanimously chosen Auditors. After arrangements had been determined upon for engaging Mr. George Dawson to deliver two Lectures on the 11th and 12th April next, the Meeting adjourned until the following evening.

WANDSWORTH.—The General Quarterly Meeting of the Literary and Scientific Institution was held at their rooms, on Wednesday evening, the 29th ult. The minutes of the former meeting having been read and confirmed, five members were elected to serve on the Committee in place of retiring members. The Secretary then read a statement of the accounts, showing a balance of 18*l.* 17*s.* 2*d.* The Institution comprised classes for drawing, reading, grammar, and pronunciation, French, discussion, &c., a new and increasing museum, and a library containing about 200 valuable and well-selected volumes. The reading-rooms contained a good supply of daily, weekly, and monthly papers, periodicals, reviews, &c.

TO CORRESPONDENTS.

Notice.—Members, and others, who can furnish or obtain original information or suggestions on the subjects included in the Society's Premium-list, or other topics connected with the Society's various departments of operation, are invited to communicate the same to the Secretary, in as condensed a form as possible, for the purpose of being either read and discussed at the evening meetings, or inserted in the Society's weekly Journal. Anonymous letters cannot be attended to. All communications, whether the author's name is to appear or not, must be accompanied by the writer's name and address.

Country Institutions.—Correspondents who are so good as to send reports of proceedings of Local Institutions, are requested to forward them immediately after the Meeting to which they refer, and not later than Tuesday morning, if intended for insertion in the following Friday's Journal.

G. R. (certainly not); H. A. T. (too late for this week); G.F.W., and G. H. (next week).

QUESTIONS FROM CORRESPONDENTS.

Omnibuses.—Are there any reasons why omnibuses should not be made wider and higher than at present? (No. 18.)

Shop Lamps.—Do you know if there is any method of getting rid of the present unsightly, inconvenient, and awkward pendent lamps and reflectors for lighting shop fronts from the streets? (No. 19.)

Mother-of-pearl.—As there is a scarcity of this material in the market just now, I should be glad to know whether there are any unworked sources of supply, or whether there is any good known substitute fo it? (No. 20.)

Enamels.—Which is the best treatise on ancient enamels, and the method of applying them in practice? (No. 21.)

⁂ Our correspondent will find a communication on this subject in the next number of the Journal.

Fuel.—Are you aware of any natural materials on the route of any of the mail packets from this country which might be used, possibly in combination with some others, as a substitute for coal, so as to do away with the necessity of shipping large supplies for our ocean steamers? (No. 22.)

MISCELLANEA.

Photographic Exhibition.—During the week some contributions of great merit have been added to the collection. Those of Count Montizon, taken from animals at the Zoological Gardens, are especially remarkable, both for the usefulness of the purpose to which the art has been thus applied, and the great skill in manipulation, without which such successful results could not have been produced. It is intended, if possible, to keep the Exhibition open until the end of January.

New Application of Daguerreotype Apparatus.—The Austrian government has ordered that when serious accidents shall occur on any of the railways belonging to the State, a daguerreotype shall be immediately taken of the train, in order to facilitate the investigation into the cause. For this purpose the daguerreotype apparatus is to be sent to all the stations. This system has already been adopted in Prussia with marked advantage.

Portable Camera.—Mr. George Stokes, who has been endeavouring, for some time, to reduce the cumbersomeness of the Camera, has recently brought out one which weighs only nine pounds with the shutter, and will take a picture eleven inches square. The shutter is so arranged that it will contain from twelve to twenty pieces of prepared paper, each piece between separate sheets of blotting paper. Light and air are completely excluded by the paper being pressed by the front portion of the shutter. When required for use, the first piece of paper is placed at the back of the glass, by the assistance of a very small hood. The impression is then taken, and by removing the millboard, the paper will fall back into its place. At the same time another piece can be brought forward ready for another picture before focusing; and so on to the end. The hood is made of India rubber cloth, and answers the purpose of a focusing-cloth, without the necessity of removal during the day. This simple arrangement has been found to be of great service, and to produce a saving both in time and trouble.

Tyrian Purple.—In a work by Mr. W. Linton, recently published by Messrs. Longman, "On Ancient and Modern Colours, from the Earliest Periods to the Present Time; with their Chemical and Artistic Properties," the following interesting description of the Tyrian purple is given at page 12.

"The renowned Tyrian dye was taken from a white vein in the throat of the shell-fish purpuræ. It was of a dark-red colour, resembling a deep rose. The purpuræ of the best description were chiefly found on the rocks of Tyre, on the coast of Asia; they were also caught at Meninge, on the Grætulan shores, in Africa; and on the coast of Laconia, in Europe. The colour varied according to the locality in which the purple fishes were taken. Those from Pontus and Galatia, being in the north, produced a black dye; in the equinoctial regions a violet hue predominated; whilst in the south, as at Rhodes, the colour was of a richer red. These purple fishes were also called Pelagia: and they were distinguished by the district as well as by the food which the district supplied. The Lutense lived in the mud; the Algense on sea-weed, the worst kind of all; and the Taniense, which frequented the bays and coasts, yielded the best, though not the deepest in colour. There are also the Calculosæ, which live in the gravel or shingly bottoms; and last, and most esteemed among the whole, the Dialeta, which are confined by their habits to no particular shore or food. Aristotle states that the largest fish come from the north, which are of a dark colour; and the smaller ones from the south, which are of a brighter red or yellow colour. Two hundred Buccina were added to one hundred and eleven Pelagian purples, to make the purple colour so much eulogized by Pliny, and one of the three shades of purple recorded by the ancients.

"The second of the three shades was the Punic or Phœnician purple red of Tyre and Tarentum—*Φοινικίδα*. The third was Conchyliata, made with Buccina alone; a violet tint, like that of the sea slightly agitated (and in shade).

"When Cornelius Nepos was young (in the time of Augustus), the violet colour prevailed; not long afterwards the red Tarentine purple was in vogue; and to this succeeded the double-dyed (*δῒβαφη*) Tyrian to which Horace alludes:—

'Te bis Afro
Murice tinctæ
Vestiunt lanæ.'

"After this, the Amethystine colour (the first of the three) was mixed with the Tyrian purple (the second named), which made the Tyriamethistus. The third, the Conchylia, or Buccinum Violet, was then united to the Tyrian dye (the second purple). To this succeeded other mixtures, dye upon dye, until the vegetable colours were resorted to for additional splendour and variety, and Kermes reds were plunged in the Tyrian crimson. To make a dye from purples they also mingled several kinds of fish, adding at one period, nitre, urine, water, salt, and Fucas (a Cretan plant, described in another page). But the dye from the Buccinum required only pure water.

"Purple stuffs were sacred from the remotest antiquity. Moses employed them for the vestments of the high priests, and for the ornaments of the Tabernacle (Exodus xxv. 4; xxvi. 1, seq.). They were twice dyed, and their value was equal to gold itself. The idols of Babylon had coverings of purple. The hero-princes of Homer were clothed with them. The colour was revered by all nations. It at once announced the dignity of the wearer."

The book is one of great interest, and its value is increased by the quotation of authorities.

Railway Tyres.—In consequence of the accident which occurred at Harrow the other day from the failure of a tyre, the Lowmoor Iron Company are at present engaged in a series of experiments for testing the best form of weld, and ascertaining the comparative strengths of a weld and of a plain piece of metal. It is understood that some of the results obtained are very curious, and tend to show that a perfect weld is possible, and that when made its strength is little less than the plain piece. The experiments are being made in a number of different ways, both as to extension and compression, and as to the effects of water.

PATENT LAW AMENDMENT ACT, 1852.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

From Gazette, 31*st Dec.*, 1852.

Dated 6th Dec.

979. W. Quaterman—A gaseous engine.

Dated 8th Dec.

993. P. A. and C. Fontaine Moreau—Machinery for applying metallic capsules.

Dated 15th Dec.

1060. W. E. Middleton—Improved lubricator.
1061. P. D'Homme—Window blinds, curtains, and hangings.
1062. S. Walker—Clogs and patterns.
1063. G. Elliott and W. Russell—Boiling down saline solutions.
1064. J. F. J. Caplin—Apparatus for preventing or curing stooping of the head or body.
1065. J. Mason—Bleaching and dyeing.
1066. A. Robscheff—Separating gold, &c., from extraneous matters.
1067. C. J. Wallis—Amalgamating and grinding substances together.
1068. A. R. Groves—Heating, drying, and evaporating.
1069. R. Taylor and J. A. Phillips—Treating zinc ores.
1070. C. Dresser—Materials in substitution of whalebone, &c.
1071. T. Dunn and W. Watts—Machinery for altering the position of engines and carriages on railways.

Dated 16th Dec.

1072. P. A. and C. Fontaine Moreau—"Lamp omnibus."
1073. A. Cointry—Manufacture of bread and biscuits.
1074. J. J. Payne—Axle in two parts.
1075. C. Barlow—Bleaching, purifying, and concentrating sulphuric acid; partly applicable to other purposes.
1076. J. Healey—Application of glass and enamel to flyers, &c., used in preparing, spinning, &c., cotton wool, and other fibrous materials.
1077. R. Blades—Cleansing sewers.
1078. J. Stevens—Grinding and polishing lenses.
1079. Sir F. C. Knowle—Manufacture of iron.
1080. T. Mosley—Tablets, letters, &c., for indicating names, &c.
1081. A. E. L. Bellford—Stoppering bottles, &c.
1082. A. Slate—Propulsion.
1083. A. Slate—Motive power from elastic fluids.
1084. A. Slate—Propelling vessels.
1085. Dunlop—Saddles.

1086. G. Michiels—Manufacture and purification of gas.
1087. G. Sidney—Improvements in jugs, &c.

Dated 17th Dec.

1088. H. Kenyon—Grinding bones.
1089. F. J. Bramwell—Steam-engines.
1090. A. Slate—Slide valve.
1091. A. Slate—Invention in steam-boilers.
1092. R. W. Billings—Ventilating chimneys and apartments.
1093. W. Wilkinson—Looped pile and cut pile fabrics.
1094. A. Krupp—Improvements in cannons.
1095. J. F. Kingston—Reciprocating motion and propelling.
1096. J. Langridge—Stays.

Dated 18th Dec.

1097. J. Matthews—A burglary alarm.
1098. G. Thomson—Machine for cutting wood.
1099. T. Y. Hall—Safety-lamps.
1100. W. Robertson—Machines for spinning.
1101. T. Elliott—Steam-engines.
1102. J. A. Westerman—Carbonization of turf, and manufacture of paper and fuel therefrom.
1103. E. Schischkar—Dyeing and colouring.
1104. E. Schischkar—Colouring or staining.
1105. C. C. Boutigny—Improvements in distillation.
1106. J. Clay—Coal gas.
1107. W. East—Machinery for crushing clods, dibbling, drilling, and sowing seeds.

Dated 20th Dec.

1109. J. Durandeau—Marks and designs in paper.
1110. G. Lingard—Taps and apparatus for admitting air to beer, &c., under draught.
1111. W. Wilkinson—Improvements in manufacture of paper &c., and production of a substance applicable fo veneers, &c., and other purposes to which gutta percha and papier mache are applicable.
1112. P. A. and C. Fontaine Moreau—Night-stools, &c., aplicable to apparatus for containing fluids liable to decomposition.
1114. C. Watson—Carriage and stable brushes.
1115. W. J. Silver—Motion to capstan and other barrels.
1116. G. Gwynne and G. F. Wilson—Candles, night-lights, and soap.

Dated 21st Dec.

1118. F. D'Albert—Chemical substitute for indigo.
1120. J. B. Moinier and C. C. Boutigny — Distilling fatty matters.
1122. J. Akrill—Manufacture of bricks, &c.
1124. J. Akrill—Crucibles.
1126. W. E. Newton—Lamps.
1128. E. Mosely—Artificial masticating apparatus.

Dated 22nd Dec.

1130. A.V. Newton—Increasing draft of furnaces, and arresting sparks of locomotive engines.
1132. F. C. Hills—Purifying gas.
1134. J. F. Kingston—Motive power by electro magnets.
1136. T. Greenshields—Manufacture of alkali.
1138. T. Vicars, sen., and T. Vicars, jun.—Baking ovens, and method of placing bread therein.
1140. J. M. Hyde—Steam engines and production of steam.

APPLICATION WITH COMPLETE SPECIFICATION FILED.

1185. F. A. Calvert—Universal drill, 28th Dec.

From Gazette, Jan. 4th, 1853.

NONE.

WEEKLY LIST OF PATENTS SEALED.

Dated 31st Dec., 1852.

57. John Joseph Macdonnell, Temple-mead, Bristol—Improvements in the construction of railways.
84. Edwin Pettit, Kingsland—Improvements in the manufacture of ammoniacal salts and manures.
221. William Crosskill, Beverley, Yorkshire—Improvements in machines for cutting or reaping growing corn, clover, and grass.
250. William Armand Gilbee, 4, South-street, Finsbury—Improved mode of disinfecting putrified and fecal matters, and converting fecal matters into manure, also applicable to the disinfection of cesspools, drains, sewers, and other similar receptacles.
382. William Chisholm, Holloway—Improvements in the purification of gas, and the obtention of certain products during the process of such purification.
440. Fennell Herbert Allman, 16, Westbourne street, Hyde-park—Improvements in the manufacture and construction of brushes.
487. Archibald Slate, Dudley—Improvements in the manufacture and construction of cores and core-bars, used in the production of hollow castings in iron and other metals.
493. George Price, Birmingham—New or improved gas-stove.
523. William Clarke, Manchester—Improvements in joints for connecting metals.
557. Robert Mallet, Dublin—Improvements in fire-proof and other buildings and structures.
558. Henry Robert Ramsbottom, Bradford, Yorkshire—Improvements in preparing and combing wool and other fibrous substances.
644. George Shand, Glasgow, and Andrew M'Lean, Edinburgh—Improvements in obtaining products from tar.
680. William Thomas Henley, St. John-street Road—Improvements in electric telegraphs, and in the apparatus and instruments connected therewith.

Dated 5th Jan., 1853.

40. Frederick Richard Holl, Weymouth-terrace, City-road—Improvements in watches and Chronometers.
59. Marcus Davis, 5, Lyon's-inn, Strand—Improvements in the manufacture of carriages, carts, military and other waggons, and wheels for locomotive and other purposes.
127. Robert W. Parker, Roxbury, Massachusetts, United States—Improved mode of giving rotatory motion to a shaft of a circular saw or other mechanical contrivance.
100. Joseph Burch, Crag Hall, near Macclesfield—Improvements in building and propelling ships and vessels.
184. Joseph Needham, 26, Piccadilly—Improvements in breech-loading firearms, and in apparatus connected therewith.
191. John Stringfellow, Chard, Somerset—Improvements in galvanic batteries for medical and other purposes.
192. George John Philps, Friday-street, London—Improvements in hats and other like coverings for the head.
195. George Stuart, Glasgow—Improvements in heating the fleeces of natural coverings of sheep and other animals when on the animals.
206. John Moseley, Birmingham—Improvements in machinery for cleansing linen and other fibrous materials.
297. Alfred Kent, Chichester, Sussex—Improvements in glazing.
338. Robert Lambert, 13, Goree-piazza, Liverpool—Improvements in tents.
392. Joseph Burch, Crag Hall, near Macclesfield—Improvements in baths and bathing.
393. Joseph Burch, Crag Hall, near Macclesfield—Improvements in building ships and vessels for the purpose of saving lives and property in cases of shipwreck or fire at sea.
399. Joseph Hopkinson the younger, Huddersfield, Yorkshire—Improvements in steam-boilers.
400. Simon Pincoffs, Manchester, and Henry Edward Schunck, Rochdale—Improvements in the treatment of madder, and other plants of the same species, and of their products, for the purpose of obtaining dyeing materials.
415. William Beckett Johnson, Manchester—Improvements in stationary steam-engines.
419. John Henry Johnson, 47, Lincoln's-inn Fields—Improvements in the manufacture of sugar.
441. John Kealy, Oxford-street—Improvements in machinery or apparatus for cutting or slicing roots.
474. William Weild, Manchester—Improvements in looms for weaving certain descriptions of pile fabrics.
554. John Collis Browne, Fort Pitt, Chatham—Relief of individuals suffering from pulmonary affections or diseases of the chest.
570. Martin Watts, Patricroft, near Manchester—Improvements in machinery or apparatus for roving or preparing cotton and other fibrous substances for spinning.
582. James Sinclair, Stirling—Improvements in engines to be worked by steam, air, or water, the said improvements being also applicable to pumps.
645. Peter Fairbairn, Leeds, Yorkshire—Improvements in self-acting reeling-machinery for reeling flax and other yarns into hanks.
646. George Fife, Newcastle-upon-Tyne—Improvements in steam and water-gauges.
662. Peter Fairbairn, Leeds, Yorkshire, and John Hargrave, Kirkstall, Yorkshire—Improvements in machinery for opening, combing, and drawing wool, flax, and other fibrous materials.
719. Sir Charles Fox, Knt., New-street, Spring-gardens—Improvements in roads; being a communication to him from a foreigner abroad.
726. John Henry Johnson—Improvements in reaping-machines and in apparatus connected therewith; being a communication to him from abroad.

WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

Date of Registration.	No. in the Register.	Title.	Proprietor's Name.	Address.
Dec. 30	3404	Improved ever-pointed Pencil.	Messrs. Williams and Jackson	Birmingham.
Jan. 4	3405	Bolt.	Webb and Greenway	Birmingham.
,, ,,	3406	Belt-fastening.	Charles Eyland	Walsall.
,, 5	3407	Belt-fastening.	Charles Eyland	Walsall.